

II. REMARKS

Claims 1-5, 8-10, 12, 14-16, 19-20, 23-24, 27, 29-32, 35-40, 45-48, 51-53, 55-61, 65-68, and 70-72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,389,922 to Seroussi et al. (hereafter "Seroussi") in view of U.S. Patent No. 5,771,011 to Masenas (hereafter "Masenas"). Claims 39 and 57 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Seroussi and U.S. Patent No. 4,558,302 to Welch (hereafter "Welch") in view of Masenas. Claims 6, 17-18, 21, 25, 33, 49, and 62-64 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Seroussi and U.S. Patent No. 5,150,430 to Chu (hereafter "Chu") in view of Masenas. Claims 41-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Seroussi and U.S. Patent No. 5,608,396 to Cheng et al. ("Cheng") in view of Masenas.

Claims 1-5, 8-10, 12, 14-16, 19-20, 23-24, 27, 29-32, 35-40, 45-48, 51-53, 55-61, 65-68, and 70-72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Seroussi and Masenas. For the reasons below, Applicants respectfully traverse these rejections and submit that Seroussi and Masenas, either individually or in combination with each other, do not teach Applicants' claimed invention.

Metrics

Claim 1 provides decision logic that "select[s] one of the plurality of different versions of the compressed data based upon one or more predetermined metrics." Claim 12 discloses "compression ratio" as one such metric. Claim 13, which was not rejected in the Examiner's substantive remarks, relates "compression speed" as yet another metric. Claim 14 states the logic selects "a version of the compressed data with a highest compression ratio." Choosing among different versions of compressed data is useful as there are instances when one metric is more important than another. For example, a data set with a higher compression ratio may be more desirable than one with a greater

compression speed when the cache area is low on available storage memory; an asynchronous write operation is involved or the target file is a "text" file type. A data set with a higher compression speed, however, might be more desirable when, for example, the cache area is not low on memory, a synchronous, read-ahead operation is involved or the target file is not a "text" file type.

When addressing how a choice is made between two compressed data sets, Seroussi picks the "compression method with the best performance." (Col. 17, Line 41-42). The cursory disclosure in Seroussi does not address how such a selection is made and certainly does not disclose selecting based upon one or more predetermined metrics. Masenas does not address the issue.

Consequently, Applicants submit claim 1 and its dependent claims are allowable over Seroussi, individually or in combination with Masenas. Applicants further submit that independent claims 19, 23, 31, 45, 58, 65 and their dependent claims, as well as newly added claim 73, for at least this reason, are allowable over Seroussi, individually or in combination with Masenas.

Selection of Compressed Data

In addition, claim 1 discloses "decision logic" configured to "select one of the plurality of different versions of the compressed data...and output the selected compressed data." In contrast, Seroussi reveals a system whereby "a copy of the original 'uncompressed data' is output from block 206." (Col. 17, Line 50). In other words, Seroussi chooses among outputting compressed data or raw data. In Applicants' claimed invention, unlike Seroussi, compressed data, not raw data, is output. Masenas does not address the issue. Consequently, Applicants submit claim 1 and its dependent claims are allowable over Seroussi, individually or in combination with Masenas. Applicants further submit that independent claims 19, 23, 31 and 65 and their dependent claims, for at least this reason, are allowable over Seroussi, individually or in combination with Masenas.

First Logic

Claim 23 discloses a "first logic" configured to "receive uncompressed data" and "send the uncompressed data to each of the plurality of compression engines." The specification imparts: "Splitting logic 240 may divide the uncompressed data 230A into a plurality of parts or portions of the uncompressed data 230A, with one portion for each of the plurality of compression engines 570 coupled to splitting logic 240." (Spec. Paragraph 63). The specification continues: "The plurality of compression engines 570 may output the plurality of compressed portions of data 230A to merging logic 260. In one embodiment, merging logic 260 may multiplex the plurality of compressed portions to produce compressed data 270A, which is a compressed version of the input uncompressed data 230A." (Spec. Paragraph 66).

Seroussi reveals no such "first logic." Masenas fails to even address the matter. Consequently, Applicants submit claim 23 and its dependent claims, for at least this reason, are allowable over Seroussi, individually or in combination with Masenas.

Concurrently

Claim 65 discloses a compression engine "operable to compare each of a plurality of received symbols with each of a plurality of entries in a history table concurrently." Claim 6, which was not rejected by the Examiner in light of Seroussi and Masenas, discloses a compression engine "operable to compare each of a plurality of received symbols with each of a plurality of entries in a history table concurrently." Consequently, Applicants submit that claim 65 is also allowable over Seroussi, individually or in combination with Masenas, for at least the same reasons that claim 6 is allowable.

Common History Table

Claim 67 discloses a data compression system "wherein the plurality of compression engines share a common history table." Neither Seroussi nor Masenas teach such a system. Consequently, Applicants submit claim 67, for at least this reason, is allowable over Seroussi, individually or in combination with Masenas.

Plurality of Engines

Claims 71 and 72 disclose a compression engine that, in turn, uses a "plurality of...compression engines." Claim 17, which the Examiner did not reject in light of Seroussi and Masenas, discloses a compression engine that also uses a "plurality of compression engines." Consequently, Applicants submit that claims 71 and 72 are also allowable over Seroussi, individually or in combination with Masenas, for at least the same reasons that claim 17 is allowable.

Location

Claims 41-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Seroussi, Masenas and Cheng. Claims 41-44 disclose data compression logic comprised "in" a "memory controller," "processor," "one or more memory modules" and a "network interface device" respectively. Configuring the logic in such a way allows for increased transmission speeds by limiting, for example, the slow transmission of uncompressed data over a bus. Doing so results in increased data transmission speed. Cheng fails to teach such compression logic comprised in devices as claimed in claims 41-44. Consequently, Applicants submit claims 41-44, for at least this reason, are allowable over Seroussi, Cheng and Masenas, individually or in combination with one another.

Other Objections and General Remarks

All other objections recited in the Office Action, for at least the reasons stated above, are traversed. Also, regarding all of the 35 U.S.C. § 103(a) rejections made in the Office Action, the Examiner has failed to meet his corresponding burden. To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2143.

As noted throughout this Response, the prior art fails to teach or suggest all the claim limitations in question. Furthermore, at no point does the Examiner show a suggestion or motivation to modify or combine the reference teachings. Finally, no reasonable expectation of success is set out.

CONCLUSION

In view of the remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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CERTIFICATION UNDER 37 C.F.R. § 1.8

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